

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

- 1 1. (Currently Amended) A method for generating a pixel-oriented graph, comprising:  
2 determining, by a computer, a first visual boundary for representing a first[[an]]  
3 aggregate of a set of values of a variable of pixels depicted in the pixel-oriented graph, wherein  
4 the pixels correspond to respective data records, wherein the first aggregate of the set of values  
5 of the variable is computed by applying an aggregate function on the set of values of the  
6 variable, wherein the first visual boundary is selectable from among plural types of visual  
7 boundaries based on received input;  
8 after determining the first visual boundary, constructing, by the computer, a set of pixel  
9 blocks that represent the values such that the pixel blocks are visually distinguished by the first  
10 visual boundary, each pixel block having a corresponding set of the pixels and each pixel having  
11 a pixel value that visually represents a corresponding one of the values of the variable.
- 1 2. (Currently Amended) The method of claim 1, ~~wherein determining a further comprising~~  
2 selecting the first visual boundary includes obtaining a selection of the aggregate from among the  
3 plural types of visual boundaries based on the received input from a user.
- 1 3. (Currently Amended) The method of claim 1, wherein determining the first[[a]] visual  
2 boundary comprises determining a location for the first visual boundary~~a line~~ in the pixel-  
3 oriented graph in response to the first aggregate.
- 1 4.-7. (Cancelled)

8. (Currently Amended) The method of claim 1, wherein constructing the set of pixel blocks comprises positioning the ~~determining a set of~~ pixel blocks at different locations with respect to ~~to be positioned above the~~ first visual boundary ~~and a set of pixel blocks to be positioned below the visual boundary.~~

9. (Previously Presented) The method of claim 1, further comprising filling in one or more gaps in the pixel blocks by replicating one or more pixels in the pixel blocks.

10. (Cancelled)

11. (Previously Presented) The method of claim 1, further comprising coloring the visual boundary.

12. (Currently Amended) The method of claim 1, further comprising applying a weight to the visual boundary that indicates a relative importance of the first aggregate.

13. (Currently Amended) A data analysis system, comprising:

a data store for holding a set of values of a variable;

a display for providing a pixel-oriented graph that represents the values;

a graph generator to obtain~~that obtains~~ the values from the data store and to determine~~that determines~~ a first visual boundary for representing a first aggregate of the values and to construct~~that constructs~~ a set of pixel blocks that represent the values such that the pixel blocks are visually distinguished by the first visual boundary, wherein the first aggregate of the values is computed by applying an aggregate function on the set of the values of the variable, and wherein the first visual boundary is selectable to have one of plural different shapes, each pixel block having a corresponding set of pixels and each pixel having a pixel value that visually represents one of the values of the variable.

14. (Currently Amended) The data analysis system of claim 13, wherein the graph generator is to obtain~~obtains~~ a selection of the first aggregate from a user.

1 15. (Currently Amended) The data analysis system of claim 13, wherein the graph generator  
2 ~~is to construct~~constructs the pixel blocks by positioning the ~~determining a set of pixel blocks at~~  
3 ~~different locations with respect to to be positioned above the first~~ visual boundary ~~and a set of~~  
4 ~~pixel blocks to be positioned below the visual boundary.~~

1 16. (Currently Amended) The data analysis system of claim 13, wherein the graph generator  
2 is to fill~~fills~~ in one or more gaps in the pixel blocks by replicating one or more pixels in the pixel  
3 blocks.

1 17. (Cancelled)

1 18. (Currently Amended) The data analysis system of claim 13, wherein the graph generator  
2 is to color~~colors~~ the visual boundary.

1 19. (Currently Amended) The data analysis system of claim 13, wherein the graph generator  
2 is to apply~~applies~~ a weight to the visual boundary that indicates a relative importance of the  
3 aggregate.

1 20. (Currently Amended) A computer-readable storage medium that contains a computer  
2 program that when executed generates a pixel-oriented graph by:  
3 determining a first visual boundary for representing a first~~[[an]]~~ aggregate of a set of  
4 values of a variable of pixels depicted in the pixel-oriented graph, wherein the pixels correspond  
5 to respective data records, wherein the first aggregate of the set of values of the variable is  
6 computed by applying an aggregate function on the set of values of the variable, wherein the first  
7 visual boundary is selectable from among plural types of visual boundaries based on received  
8 input; and  
9 after determining the first visual boundary, constructing a set of pixel blocks that  
10 ~~represent the values~~ such that the pixel blocks are visually distinguished by the first visual

11 boundary, each pixel block having a corresponding set of the pixels and each pixel having a pixel  
12 value that visually represents a corresponding one of the values of the variable.

1 21.-25. (Cancelled)

1 26. (New) The method of claim 1, further comprising selecting the first visual boundary from  
2 among the plural types of visual boundaries based on the received input, wherein the plural types  
3 of visual boundaries include two or more of:

4 a line,  
5 a curve,  
6 a rectangle, and  
7 a circle.

1 27. (New) The method of claim 1, further comprising determining a second visual boundary  
2 for representing a second aggregate of the set of values of the variable, wherein the second  
3 aggregate is a different type of aggregate than the first aggregate, and wherein the pixel blocks  
4 are further visually distinguished by the second visual boundary.

1 28. (New) The method of claim 27, wherein the first aggregate is one of an average and  
2 median of the values of the variable, and the second aggregate is a threshold.

1 29. (New) The method of claim 27, wherein the second visual boundary is of a different type  
2 from the first visual boundary.

1 30. (New) The method of claim 1, wherein determining the first visual boundary comprises  
2 determining the first visual boundary that is a boundary curve.

1 31. (New) The method of claim 1, further comprising:  
2 dividing the pixel-oriented graph into plural bars corresponding to plural corresponding  
3 groups of the pixels,  
4 wherein constructing the set of pixel blocks comprises providing pixel blocks in each of  
5 the plural bars, and wherein the first visual boundary is provided in each of the plural bars.

1 32. (New) The method of claim 31, further comprising:  
2 determining a second visual boundary for representing a second aggregate of the values  
3 of the variable; and  
4 providing the second visual boundary in each of the bars.

1 33. (New) The method of claim 1, wherein the aggregate function is one of an average  
2 function and a median function.

1 34. (New) The data analysis system of claim 13,  
2 wherein the graph generator is to:  
3 receive input regarding selection of the first visual boundary, and  
4 select one of the plural shapes for the first visual boundary based on the received  
5 input.

1 35. (New) The data analysis system of claim 13, wherein the plural different shapes comprise  
2 two or more from:  
3 a line,  
4 a curve,  
5 a rectangle, and  
6 a circle.

1 36. (New) The data analysis system of claim 13, wherein the graph generator is to determine  
2 a second visual boundary for representing a second aggregate of the set of values of the variable,  
3 where the second aggregate is a different type of aggregate than the first aggregate,

wherein the pixel blocks are further visually distinguished by the second visual boundary.

37. (New) The data analysis system of claim 36, wherein the first aggregate is one of an average and median of the values of the variable, and the second aggregate is a threshold.

38. (New) The data analysis system of claim 13, wherein the graph generator is to further:  
divide the pixel-oriented graph into plural bars corresponding to plural corresponding groups of the pixels,  
wherein the set of pixel blocks comprises pixel blocks in each of the plural bars, and  
where the first visual boundary is provided in each of the plural bars.

39. (New) The data analysis system of claim 38, wherein the graph generator is to further  
determine a second visual boundary for representing a second aggregate of the values of the variable, and  
provide the second visual boundary in each of the bars.

40. (New) The computer-readable storage medium of claim 20, wherein the computer program when executed further performs:  
a line,  
a curve,  
a rectangle, and  
a circle.

41. (New) The computer-readable storage medium of claim 20, wherein the computer program when executed further performs:  
determining a second visual boundary for representing a second aggregate of the set of values of the variable, wherein the second aggregate is a different type of aggregate than the first aggregate, and wherein the pixel blocks are further visually distinguished by the second visual boundary.

1 42. (New) The computer-readable storage medium of claim 41, wherein the first aggregate is  
2 one of an average and median of the values of the variable, and the second aggregate is a  
3 threshold.

1 43. (New) The computer-readable storage medium of claim 20, wherein the computer  
2 program when executed further performs:  
3 dividing the pixel-oriented graph into plural bars corresponding to plural corresponding  
4 groups of the pixels,  
5 wherein constructing the set of pixel blocks comprises providing pixel blocks in each of  
6 the plural bars, and wherein the first visual boundary is provided in each of the plural bars.

1 44. (New) The computer-readable storage medium of claim 43, wherein the computer  
2 program when executed further performs:  
3 determining a second visual boundary for representing a second aggregate of the values  
4 of the variable; and  
5 providing the second visual boundary in each of the bars.